

REMARKS/ARGUMENTS

The present application includes claims 1-3 and 5-20. By this response, independent claims 1, 10 and 18 have been amended. Also, dependent claims were amended to conform to claims from which they ultimately depend. The Applicants respectfully submit that no new matter has been added by this amendment

Claims 1-3, 5-20 were rejected under 35 U.S.C. §103(a) as being anticipated by Strobel et al., U.S. Pat. No. 7,050,844 B2 ("Strobel") in view of Dekel (US Published Application 2002/0172328) ("Dekel").

Amended Claims

Independent claims 1, 10, and 18 have been amended to recite, in various forms, that the plurality of fluoroscopic images obtained are static images. Support for this amendment can be found in at least paragraph 0023 of the published application No. US 2005/0169510. No new matter has been added. As opposed to items shown in cited art, the recited static images are continuously set in motion to create a naturally occurring 3D image. Such systems and methods are not found in the cited art, as explained below, and, thus, for at least these reasons, claims 1-3, 5-20, should be allowable.

Dependent claims were amended to conform to claims from which they ultimately depend.

Claim Rejections – 35 U.S.C. § 103

The Applicants now turn to the rejection of claims 1-3 and 5-20 under 35 U.S.C. 103(a) as being unpatentable over Strobel et al. (US 7050844) in view of Dekel (US Published Application 2002/0172328).

The Office Action states that "[w]hile Strobel meets a number of limitations of the claimed invention, as pointed out more fully above, Strobel does not specifically teach the image by image manner to create an animation. (Office Action, page 3).

Further, the Office Action states “[s]pecifically, Dekel et al. teaches FIG. 4, a patient 10 is positioned within the cone-shaped X-ray beam 12 of the fluoroscope such that an X-ray projection image of the patient's organ 11 is seen on the screen 16. In the calibration phase, the integrated navigation system 35, which comprises a navigation catheter 36, is used to establish the coordinates of the catheter relative to fiducial points of the system (not shown) while X-ray image projection 33 of the catheter are obtained. The fiducial points may be the location of a magnetic field generator or devices mounted on other catheters or on the body surface. (Office Action, page 3).

Further, the Office Action states “[i]t would have been obvious to one off ordinary skill in the art to automatically display each image in a plurality of images in an image by image manner of Dekel in Strobel presentation to improve navigation and localization of the position of tools, probes, and catheters in three dimension relative to a patient's anatomy using conventional fluoroscopy.” (Office Action, page 3).

Dekel does not teach, suggest or disclose animation. Independent claim 1 has been amended to claim “automatically displaying each image in said collected plurality of static images in an image by image manner-to create an animation, wherein said at least one position and orientation of said at least one instrument is projected on each said image.” Dekel does not teach that the images are automatically displayed in an image by image to create an animation. Rather, Dekel teaches that “the system then generates an image of the navigation catheter and displays it simultaneously with the stored fluoroscope image or sequences of images of the heart.” (Dekel at para. 0039). Nowhere does Dekel teach, suggest or disclose that the plurality of static images are displayed in such a manner as to create an animation as claimed in claim 1 of the instant application. Dekel does not teach, disclose or suggest the creation of an animation

using static images. Dekel does not cure the deficiencies of Strobel. Thus, for at least this reason, Applicants submit that neither Strobel nor Dekel, taken alone or in theoretical combination, teaches or reasonably suggests all the limitations of claim 1. Applicant respectfully submits currently amended independent claim 1 is in condition for allowance.

Claims 2-3 and 5-9 ultimately depend from claim 1 and should be allowable at least for the reasons stated.

With regard to Independent claim 10, the Office Action alleges that Dekel teaches the limitation of “automatically repeating said selecting, computing, projecting, and displaying steps to create an animation using a sequential image by image presentation through said series of 2D static images” and points to paragraphs 0025 and paragraphs 0028-0033 of Dekel for support. Applicants respectfully disagree with the Office Action. Nowhere does Dekel teach, disclose or suggest creating an animation.

Applicants respectfully submit that the cited paragraphs, 0025 and 0028-0033 do not disclose creating an animation using a sequential image by image presentation through said series of 2D static images. Applicants respectfully submit that nowhere does the Office Action explain why claim 10 would have been obvious to one of ordinary skill in the art at the time the invention was made using the paragraphs cited by the Office Action. As presented above, nowhere does Dekel teach, suggest or disclose an animation is created using a sequential image by image presentation through said series of 2D static images as claimed in claim 10 of the instant application. Dekel does not teach, disclose or suggest the creation of an animation. Dekel does not cure the deficiencies of Strobel. Thus, for at least this reason, Applicants submit that neither Strobel nor Dekel, taken alone or in theoretical combination, teaches or reasonably suggests all the limitations of claim 10. Applicant respectfully submits currently amended independent claim 10 is in condition for allowance.

Claims 11-17 ultimately depend from claim 10 and should be allowable at least for the reasons stated.

Regarding independent claim 18, the Office Action alleges that Dekel teaches that the location of the instrument is continuously monitored by the location device and processed by the computer. Further, the Office Action alleges that the system then generates an image of the navigation catheter and displays it simultaneously with the stored fluoroscope image or sequences of images of the heart. (Office Action at p. 8). As discussed above, Dekel does not teach that the images are automatically displayed in an image by image manner to create an animation. Rather, Dekel teaches that “the system then generates an image of the navigation catheter and displays it simultaneously with the stored fluoroscope image or sequences of images of the heart.” (Dekel at para. 0039). Dekel does not disclose a device to create animation of the images. Nowhere does Dekel teach, suggest or disclose a processing device communicating with at least said collection device and adapted to create an animation by automatically and continuously presenting an image by image display of said series of static images as claimed in claim 18 of the instant application. Further, Dekel does not cure the deficiencies of Strobel. Thus, for at least this reason, Applicants submit that neither Strobel nor Dekel, taken alone or in theoretical combination, teaches or reasonably suggests all the limitations of claim 18. Applicant respectfully submits currently amended independent claim 18 is in condition for allowance.

Claims 19-20 ultimately depend from claim 18 and should be allowable at least for the reasons stated.

As claims stand amended, Applicants respectfully submit, that Dekel does not teach the claimed features of independent claims 1, 10, and 18. Further, the Applicants respectfully submit that the combination of Strobel and Dekel would not make the claimed invention obvious to one of ordinary skill in the art at the time of the invention.

Claims 2-3, 5-9; 11-17; and 19-20 depend from independent claims 1, 10, and 18, respectively. The Applicants respectfully submit that as claims 1, 10, and 18 should be allowed for at least the reasons discussed above, claims 2-3, 5-9, 11-17, and 19-20 should also be allowed.

CONCLUSION

In view of the above remarks, Applicants respectfully submit that claims 1-3 and 5-20 now pending in the application contain patentably distinct subject matter over all the references of record and are in condition for allowance. Applicants, therefore respectfully request consideration of the pending claims and a finding of their allowability. A notice to this effect is respectfully requested. Please feel free to contact the undersigned should any questions arise with respect to this case that may be addressed by telephone.

The Commissioner is authorized to charge any additional fees or credit overpayment to the Deposit Account of GTC, Account No. 070845.

Respectfully submitted,

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